



Wedron Operations — Wedron Silica Division
~~Onsite Properties Company~~ Pebble Beach Corporation
Post Office Box 176
Wedron, Illinois 60557 • 815-433-3696

July 21, 1977

Illinois Environmental Protection Agency
Division of Air Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

RECEIVED
JUL 26 1977
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
STATE OF ILLINOIS

Re: I.D. No. 099804AAB

Gentlemen:

replied
We are submitting an operating permit application for an Enviroengineering A33-18000 Ventri-Rod wet scrubber installed on construction permit No. C701041. This installation replaced a "homemade" collector covered in operating permit No. 03031358 - Area 1 New Dryer Building - Pg. 19 Conveyor Exhaust System. All other equipment covered by that operating permit has not been affected and all information contained therein is still true, correct, current and complete.

We feel that the new scrubber installation (new installation marked in red on print No. 509) will reduce respirable dust emissions within the dryer building providing cleaner air for employees involved in that phase of our operation and at the same time reduce emissions to the atmosphere because of its increased efficiency.

We trust that this new installation will meet with your approval.

Very truly yours,

Wedron Silica Division
PEBBLE BEACH CORPORATION

Dale N. Munson

Dale N. Munson
Project Engineer

DNM:rb



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

AREA #1 NEW DRYER BUILDING		FOR AGENCY USE ONLY	
APPLICATION FOR A PERMIT (A)		I. D. NO.	<u>099 804 AAB</u>
<input type="checkbox"/> CONSTRUCT <input checked="" type="checkbox"/> OPERATE		PERMIT NO.	<u>0303 1358</u>
NAME OF EQUIPMENT TO BE CONSTRUCTED OR OPERATED (B)		DATE	<u>07-26-77</u>
(Environeering A33) Wet Scrubber			

1a. NAME OF OWNER: Pebble Beach Corporation		2a. NAME OF OPERATOR: Wedron Silica Division	
1b. STREET ADDRESS OF OWNER: Post Office Box 567		2b. STREET ADDRESS OF OPERATOR: 400 West Higgins Road	
1c. CITY OF OWNER: Pebble Beach		2c. CITY OF OPERATOR: Park Ridge	
1d. STATE OF OWNER: California	1e. ZIP CODE: 93953	2d. STATE OF OPERATOR: Illinois	2e. ZIP CODE: 60068

3a. NAME OF CORPORATE DIVISION OR PLANT: Wedron Plant		3b. STREET ADDRESS OF EMISSION SOURCE: Post Office Box 176	
3c. CITY OF EMISSION SOURCE: Wedron	3d. LOCATED WITHIN CITY LIMITS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3e. TOWNSHIP: Dayton	3f. COUNTY: LaSalle
		3g. ZIP CODE: 60557	

4. ALL CORRESPONDENCE TO: (NAME OF INDIVIDUAL) R. H. Reed	5. TELEPHONE NUMBER FOR AGENCY TO CALL: 815-433-3696 or 3697
6. ADDRESS FOR CORRESPONDENCE: (CHECK ONLY ONE) <input type="checkbox"/> OWNER: <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> EMISSION SOURCE	7. YOUR ID NUMBER FOR THIS APPLICATION: (C) 099804AAB <u>A #1 DRYER B</u>

8. THE UNDERSIGNED HEREBY MAKES APPLICATION FOR A PERMIT AND CERTIFIES THAT THE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORRECT, AND FURTHER CERTIFIES THAT ALL PREVIOUSLY SUBMITTED INFORMATION REFERENCED IN THIS APPLICATION REMAINS TRUE, CORRECT AND CURRENT. BY AFFIXING HIS SIGNATURE HERETO HE FURTHER CERTIFIES THAT HE IS AUTHORIZED TO EXECUTE THIS APPLICATION.

AUTHORIZED SIGNATURE(S): (D)

BY _____ DATE _____
SIGNATURE _____
TYPED OR PRINTED NAME OF SIGNER _____
TITLE OF SIGNER _____

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DIVISION OF AIR POLLUTION CONTROL
STATE OF ILLINOIS

BY _____ DATE _____
SIGNATURE M. W. Kidd
TYPED OR PRINTED NAME OF SIGNER _____
TITLE OF SIGNER Manager of Operations

(A) THIS FORM IS TO PROVIDE THE AGENCY WITH GENERAL INFORMATION CONCERNING THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. THIS FORM MAY ONLY BE USED TO REQUEST ONE TYPE OF PERMIT - CONSTRUCTION OR OPERATION - AND NOT BOTH.

(B) CLEARLY IDENTIFY THE GENERIC NAME OF THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. SUCH IDENTIFICATION WILL APPEAR ON THE PERMIT WHICH MAY BE ISSUED PURSUANT TO THIS APPLICATION. THIS FORM MUST BE ACCOMPANIED BY THE APPLICABLE ADDENDA.

(C) PROVIDE A NUMBER IN ITEM 7 ABOVE WHICH YOU WOULD LIKE THE AGENCY TO USE FOR IDENTIFICATION OF YOUR EQUIPMENT. YOUR IDENTIFICATION NUMBER WILL BE REFERENCED IN ALL CORRESPONDENCE, RELATIVE TO THIS APPLICATION, FROM THIS AGENCY. YOUR IDENTIFICATION NUMBER MUST NOT EXCEED TEN (10) CHARACTERS.

(D) THIS APPLICATION MUST BE SIGNED IN ACCORDANCE WITH PCB REGS., CHAPTER 2, PART 1, RULE 103(a)(4) OR 103(b)(5) WHICH STATES: "ALL APPLICATIONS AND SUPPLEMENTS THERETO SHALL BE SIGNED BY THE OWNER AND OPERATOR OF THE EMISSION SOURCE OR AIR POLLUTION CONTROL EQUIPMENT, OR THEIR AUTHORIZED AGENT, AND SHALL BE ACCOMPANIED BY EVIDENCE OF AUTHORITY TO SIGN THE APPLICATION."

IF THE OWNER OR OPERATOR IS A CORPORATION, SUCH CORPORATION MUST HAVE ON FILE WITH THE AGENCY A CERTIFIED COPY OF A RESOLUTION OF THE CORPORATION'S BOARD OF DIRECTORS AUTHORIZING THE PERSONS SIGNING THIS APPLICATION TO CAUSE OR ALLOW THE CONSTRUCTION OR OPERATION OF THE EQUIPMENT TO BE COVERED BY THE PERMIT.



9. AN OPERATING PERMIT APPLICATION MUST BE SUBMITTED IN DUPLICATE.
A CONSTRUCTION PERMIT APPLICATION FOR CONSTRUCTION IN COOK COUNTY OUTSIDE OF THE CORPORATE LIMITS OF CHICAGO MUST BE SUBMITTED IN QUADRUPPLICATE.
A CONSTRUCTION PERMIT APPLICATION IN ALL OTHER LOCATIONS MUST BE SUBMITTED IN TRIPPLICATE.

10. THE APPLICANT SHALL SUBMIT A PLOT PLAN AND MAP SHOWING DISTANCES TO THE NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE OPERATION IS LOCATED AND DISTANCES TO THE NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS. IF SUCH A PLOT PLAN AND MAP HAS ALREADY BEEN SUBMITTED, INDICATE THE ASSOCIATED AGENCY I.D. NUMBER AND PERMIT APPLICATION NUMBER. AGENCY I.D. NO. 099 804 AAB APPLICATION NO. 0 301 0718

11. THE APPLICANT SHALL SUBMIT A PROCESS FLOW DIAGRAM DEPICTING ALL EMISSION SOURCES AND ALL AIR POLLUTION CONTROL EQUIPMENT COVERED BY THIS PERMIT APPLICATION. THE DIAGRAM SHALL INCLUDE LABELS FOR EACH EMISSION SOURCE AND EACH ITEM OF AIR POLLUTION CONTROL EQUIPMENT, AND SHALL SET FORTH MAXIMUM FLOW RATES FOR (1) ALL PROCESSING EQUIPMENT, (2) ALL AIR POLLUTION CONTROL EQUIPMENT, (3) ALL EMISSION SOURCES, AND (4) ALL STACKS AND VENTS. NUMBER OF SHEETS: 1 DRAWING NUMBER(S): 509

12. FOR EACH EMISSION SOURCE AND EACH ITEM OF AIR POLLUTION CONTROL EQUIPMENT IDENTIFIED ON THE PROCESS FLOW DIAGRAM, THE APPLICANT SHALL COMPLETE AND SUBMIT THE APPLICABLE PERMIT APPLICATION FORMS. THE FLOW DIAGRAM SHALL INDICATE THROUGH WHICH STACK OR VENT AN EMISSION SOURCE OR ITS RELATED AIR POLLUTION CONTROL EQUIPMENT IS EXHAUSTED. IF IT IS EXHAUSTED WITHIN A BUILDING, SO INDICATE.
No

13. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, AND THE APPLICANT IS INCORPORATING BY REFERENCE PREVIOUSLY GRANTED INSTALLATION OR CONSTRUCTION PERMITS, HE SHALL COMPLETE FORM APC-210, ENTITLED "DATA AND INFORMATION -- INCORPORATION BY REFERENCE."
N/A

14. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, AND THE STARTUP OF ANY EMISSION SOURCE DESCRIBED BY THIS APPLICATION PRODUCES AN AIR CONTAMINANT IN EXCESS OF APPLICABLE STANDARDS, THE APPLICANT MAY REQUEST PERMISSION TO EXCEED SUCH STANDARDS BY COMPLETING FORM APC-203, ENTITLED "OPERATION DURING STARTUP."
N/A

15. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, AND THE APPLICANT IS APPLYING FOR PERMISSION TO OPERATE AN EMISSION SOURCE DURING MALFUNCTIONS OR BREAKDOWNS PURSUANT TO PCB REGS., CHAPTER 2, RULE 105, THE APPLICANT MAY REQUEST SUCH PERMISSION BY COMPLETING FORM APC-204, ENTITLED "OPERATION DURING MALFUNCTION AND BREAKDOWN."
N/A

16. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT AND ALL OR ANY PART OF THE PROCESS MUST BE CONTROLLED OR MODIFIED TO COMPLY WITH APPLICABLE REGULATIONS, THE APPLICANT SHALL COMPLETE FORM APC-202, ENTITLED "COMPLIANCE PROGRAM & PROJECT COMPLETION SCHEDULE."
N/A

17. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, DOES THE OPERATION COVERED BY THIS APPLICATION REQUIRE AN EPISODE ACTION PLAN? ☐ YES ☒ NO

18. WAS EACH EMISSION SOURCE COVERED BY THIS APPLICATION, AS OF APRIL 14, 1972, IN COMPLIANCE WITH THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION," ADOPTED BY THE FORMER AIR POLLUTION CONTROL BOARD AND CONTINUED EFFECTIVE PURSUANT TO SECTION 49(c) OF THE ENVIRONMENTAL PROTECTION ACT? ☒ YES ☐ NO

19. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, WAS THE OPERATION THE SUBJECT OF A VARIANCE PETITION FILED WITH THE ILLINOIS POLLUTION CONTROL BOARD ON OR BEFORE JUNE 13, 1972? ☐ YES ☒ NO
IF "YES," CITE PCB NUMBER(S): _____ DATE OF BOARD ORDER: _____
HAD THE APPLICANT ON OR BEFORE APRIL 14, 1972, COMMENCED CONSTRUCTION OF EQUIPMENT OR MODIFICATIONS SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE APPLICABLE LIMITATIONS OF THE "RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION," ADOPTED BY THE FORMER AIR POLLUTION CONTROL BOARD AND CONTINUED EFFECTIVE PURSUANT TO SECTION 49(c) OF THE ENVIRONMENTAL PROTECTION ACT? ☐ YES ☐ NO
IF "NO," EXPLAIN IN DETAIL AND MARK YOUR EXPLANATION AS EXHIBIT D.
TOTAL NUMBER OF PAGES IN EXHIBIT D: N/A

20. IF THIS IS AN APPLICATION FOR AN OPERATING PERMIT, THE APPLICANT SHALL SUBMIT AN ESTIMATE OF THE MAXIMUM ONE-HOUR AMOUNTS OF PARTICULATE MATTER, SULFUR DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, AND ORGANIC MATERIAL EMITTED FROM ALL SOURCES LOCATED ON THE PLANT OR PREMISES. THIS ESTIMATE SHALL INCLUDE ALL EMISSION SOURCES LOCATED ON THE APPLICANT'S PREMISES AND NOT JUST THE EMISSION SOURCES DESCRIBED IN THIS APPLICATION.

MATERIAL	MAXIMUM ONE-HOUR AMOUNTS	MATERIAL	MAXIMUM ONE-HOUR AMOUNTS	MATERIAL	MAXIMUM ONE-HOUR AMOUNTS
PARTICULATE MATTER	<u>48</u> LB	SULFUR DIOXIDE	<u>245</u> LB	NITROGEN OXIDES	<u>55</u> LB
ORGANIC MATERIAL	<u>0</u> LB	CARBON MONOXIDE	<u>7</u> LB		

21. WHAT IS THE SIZE (IN ACRES) OF APPLICANT'S PREMISES?
1054 Acres

22. LIST AND IDENTIFY ALL FORMS, EXHIBITS, AND OTHER INFORMATION SUBMITTED AS PART OF THIS APPLICATION. PLEASE NUMBER EVERY PAGE AND STATE THE TOTAL NUMBER OF PAGES IN THIS APPLICATION. APC200-2Pgs; APC260-3Pgs; Dwg 509



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

DATA AND INFORMATION INCORPORATION BY REFERENCE	FOR AGENCY USE ONLY
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1. NAME OF OWNER: <u>Pebble Beach Corporation</u>	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER): <u>Wedron Plant-Wedron Silica Division</u>
3. STREET ADDRESS OF EMISSION SOURCE: <u>P.O. Box 176</u>	4. CITY OF EMISSION SOURCE: <u>Wedron, Illinois 60557</u>
5. IDENTIFICATION NUMBER: <u>099 804 AAB</u>	

6a. APPLICATION NUMBER: <u>C701041</u>	b. IDENTIFICATION ON FLOW DIAGRAM: <u>Dwg. No. 509</u>
c. <input checked="" type="checkbox"/> CONSTRUCTION <input type="checkbox"/> OPERATION OF <u>Environeering A33 Wet Scrubber</u>	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

7a. APPLICATION NUMBER: <u>03031358</u>	b. IDENTIFICATION ON FLOW DIAGRAM: <u>Dwg. RR2-R0 (New Dwg. No. 509)</u>
c. <input type="checkbox"/> CONSTRUCTION <input checked="" type="checkbox"/> OPERATION OF <u>Area I New Dryer Building</u>	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

8a. APPLICATION NUMBER:	b. IDENTIFICATION ON FLOW DIAGRAM:
c. <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> OPERATION OF _____	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

9a. APPLICATION NUMBER:	b. IDENTIFICATION ON FLOW DIAGRAM:
c. <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> OPERATION OF _____	
d. DOES THE DATA & INFORMATION PREVIOUSLY SUBMITTED REMAIN TRUE, CORRECT, CURRENT & COMPLETE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
e. IF "NO," SUBMIT THE APPLICABLE FORMS OR CLEARLY STATE THE DATA & INFORMATION WHICH IS NO LONGER TRUE, CORRECT, CURRENT AND COMPLETE.	

FOR AGENCY USE ONLY

SCRUBBER

1. FLOW DIAGRAM DESIGNATIONS OF SCRUBBERS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): See Drawing No. 509

2. MANUFACTURER: Enviroengineering Inc.
Subsidiary of The Riley Company

3. MODEL NAME AND NUMBER: A33-18000 Ventri-Rod Scrubber

4. SCRUBBER TYPE:

☐ HIGH ENERGY (GAS STREAM PRESSURE DROP 6 IN H₂O)

☐ PACKED (PACKING TYPE _____; PACKING SIZE _____ IN; PACKED HEIGHT _____ IN)

☐ SPRAY (NUMBER OF NOZZLES 2; NOZZLE PRESSURE 20 PSIG)

☐ OTHER (SPECIFY _____ ATTACH DESCRIPTION AND SKETCH WITH DIMENSIONED DETAILS)

5. SCRUBBER GEOMETRY:
LENGTH IN DIRECTION OF GAS FLOW 120 IN; CROSS-SECTION 48 IN X 84 IN OR _____ IN DIA; ☒ CROSS FLOW ☐ COUNTER FLOW

6. LIQUID FLOW RATE INTO SCRUBBER: 40 GPM

7. CHEMICAL COMPOSITION OF SCRUBBANT: H₂O

8. INLET GAS TEMPERATURE: 110 °F

9. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):
PARTICULATE *99 % GASEOUS _____ %

OTHER TYPES OF CONTROL EQUIPMENT

1. FLOW DIAGRAM DESIGNATION OF CONTROL EQUIPMENT DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201):

2. GENERIC NAME OF CONTROL EQUIPMENT:

3. MANUFACTURER:

4. MODEL NAME AND NUMBER:

5. ATTACH DESCRIPTION AND SKETCH OF CONTROL EQUIPMENT WITH DIMENSIONED DETAILS AND FLOW RATES.

6. EFFICIENCY OF CONTROL (ATTACH TEST REPORT OR EXPLAIN ESTIMATE):
PARTICULATE _____ % GASEOUS _____ %

MAXIMUM EMISSIONS FROM EACH IDENTICAL EXIT

CONTAMINANT	CONCENTRATION OR EMISSION RATE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE	
1. PARTICULATE MATTER	a. <u>0.00065</u> GR/SCF	b. <input type="checkbox"/> LB/10 ⁶ BTU <input checked="" type="checkbox"/> <u>.072</u> LB/HR	c.	<u>See Attached Explanation</u>
2. CARBON MONOXIDE	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	<u>(Exhibit A)</u>
3. NITROGEN OXIDES	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
4. ORGANIC MATERIAL	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
5. SULFUR DIOXIDE	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	
6. OTHER (SPECIFY)	a. _____ PPM (VOL)	b. <input type="checkbox"/> LB/10 ⁶ BTU <input type="checkbox"/> LB/HR	c.	

EXHAUST DATA

1. FLOW DIAGRAM DESIGNATIONS OF EXITS DESCRIBED IN THIS SECTION (REFER TO "GENERAL INSTRUCTIONS FOR COMPLETION OF PERMIT APPLICATIONS," FORM APC-201): See Dwg. No. 509

2. GAS FLOW RATE THROUGH EACH EXIT: 13000 ACFM

3. EXIT GAS TEMPERATURE: 80 °F

4. EXIT DIAMETER: 2.16 FT

5. EXIT HEIGHT ABOVE GRADE: 35 FT

6. MAXIMUM HEIGHT OF NEARBY BUILDINGS: 38 FT

7. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: 308 FT

Exhibit "A"

Concentration or Emission Rate

ArRo Laboratories sampled the stack on the conveyor exhaust system, which consists of a settling box and fan with water addition covered under operating permit 03031358 AREA 1 NEW DRYER BUILDING, and found an emission rate of 0.34 lb/hr. We estimate the efficiency of this existing "homemade" collector to be 30% in which case the inlet grain loading would be:

$$0.34 \text{ lb/hr} \times 7000 \text{ gr/lb} \times 1/60 \text{ min/hr} \times 1/2043 \text{ SCFM} \times 1/0.30 = .065 \text{ gr/SCF}$$

Because the new scrubber in this application is being used on similar equipment and will replace the "homemade" collector, we use this grain loading and the new scrubber efficiency of *99% for 0-5 micron particles and calculate the emission rate for the new scrubber to be:

Design: 13000 CFM

$$.065 \text{ gr/SCF} \times 13000 \text{ CFM} \times 1/7000 \text{ gr/lb} \times 60 \text{ min/hr} \times (100-99)\% = 0.072 \text{ lb/hr}$$

This emission rate in grains per standard cubic foot then is:

$$.065 \text{ gr/SCF} (100-99)\% = 0.00065 \text{ gr/SCF}$$

- * Efficiency data from "U.S. Environmental Protection Agency" - "Compilation of Air Pollutant Emission Factors" Second Edition 193 and Environeering a subsidiary of The Riley Company literature.